

It's Important  
to Know  
In Time'

# Air Conditioning & REFRIGERATION



# NEWS

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## WPB SCHEDULES 64,000 ELECTRIC RANGES FOR 1944

WASHINGTON, D. C.—Some 64,000 three-burner, apartment type electric ranges will be produced in 1944, announces the War Production Board in a statement that regulations governing such production by manufacturers in areas where labor and facilities are available will soon be issued.

Production will be under a special emergency program designed to meet essential needs of the armed forces, hospitals, and Federal Public Housing Authority and Federal Housing Administration projects, as well as to provide essential replacements for civilians who are or have been using electric ranges.

Number of ranges proposed would be about 10% of the 1941 production rate.

Strict controls will be set up governing distribution of ranges to the public, it was said, but ranges will continue to be transferred to the armed forces, hospitals, and housing projects on the basis of approval of form WPB 1319.

Only a small portion of the 24 former electric range manufacturers will be permitted to resume production, it is thought, because of WPB requirements that there be a minimum of interference with direct war work.

## WASHER PRODUCTION SOON HINTED BY CANADIAN GOVT.

MONTREAL, Quebec—Canada will resume manufacture of washing machines as one of the major moves in a general relaxation of controls on materials, it was hinted in an announcement by Hon. C. D. Howe, minister of munitions and supply, who said that an increased amount of certain strategic materials will be available for certain goods.

Already scrap aluminum, hitherto held off the civilian market for war use, now is available for consumer goods manufacture subject to selective service regulations on labor supply and the over-all priority of war production.

Also rescinded are three restrictive orders on steel for civilian use.

"The relaxations will permit industry to employ its ingenuity in the use of the metals now in larger supply, but little effect will be evident to the public for some time," cautioned the Wartime Price and Trade Board.

Only price controls will be maintained over the material release, it was announced. A manufacturer who can get scrap material, and has the facilities can produce anything so long as it does not interfere with the war effort, it was announced.

Washing machine manufacture, however, will be scheduled by the government, and the Munitions Department will make available plant facilities, labor, and material, and will direct production as it does for war items.

## Half Billion Farm Market Seen In REA Expansion

LITTLE ROCK, Ark.—Sale of at least a half billion dollars worth of farm and home electrical appliances will result from a contemplated three-year postwar rural electrification program of "well over \$500,000,000," it was predicted by William J. Neal, of Washington, chief deputy administrator of the Rural Electrification Administration, in an address recently at the annual banquet of Region Eight of the National Rural Electric Cooperative Assn.

"We are making plans to be ready for action," Neal said. "Present studies indicate that with a minimum of expense and effort, REA, its cooperative borrowers and others, working together, can have available at a moment's notice a postwar construction program of well over \$500,000,000 in the first three years."

Delegates earlier adopted a resolution calling for expenditure of at least \$40,000,000 in postwar construction of electrical facilities in the four states of the region.

## CRMA Eyes Markets In Latin America

CHICAGO — Postwar plans of many commercial refrigeration firms reveal increasing interest in foreign markets, particularly Latin America, it was disclosed when the Commercial Refrigerator Manufacturers Association met here recently.

Sterling Smith, chief of the refrigeration section of WPB, discussed the various rules and regulations contained in the new L-38 order, which sets up production quotas for a number of commercial refrigeration products.

After a discussion by C. V. Hill, Jr., president of the association, on future commercial opportunities, consensus of member manufacturers was that the biggest market would be the retail food store, now making good money and probably preparing to modernize completely after the war.

In general, the manufacturers expressed much optimism over the future.

## Industry Maps Drive on Better Appliance Care

E.E.I.-Sponsored Campaign  
To Save Appliances  
Starts In January

NEW YORK CITY—To keep the country's 200 million electrical appliances operating for the duration, all branches of the electrical industry will launch in January a "National Appliance Conservation Program" under the direction of Edison Electric Institute, reports M. R. Rodgers, chairman of the E.E.I. committee handling the drive.

Backing the "Better Care—Less Repair" campaign are manufacturers, distributors, retailers, and utilities, and the drive has the endorsement of the Office of Civilian Requirements and the Office of War Utilities. It is said to be one of the largest and most comprehensive campaigns of its kind.

"It is estimated that millions of electrical appliances save an average of 300 million housewives' hours every week," explained Mr. Rodger. "Many of these hours saved are devoted to Red Cross, U.S.O., Service Men's Centers, the selling of war bonds, stamps, and numerous other war services.

"In addition to emphasizing the better care of appliances, another important feature of the drive is the redistribution of appliances. It is urged that utilities and dealers organize the swap or trade-in plans in an endeavor to locate idle appliances and to make them available for persons who need them. There are several plans now being promoted by utilities and dealers. We hope to see an expansion of this particular phase of the conservation effort."

The whole plan revolves around a practical and useful appliance "calendar check list." On the front of the check list is a 12-month calendar. The check list underneath tells the housewife many things she can do to maintain her appliances, and likewise stresses the things she should not do in order to assure

(Concluded on Page 2, Column 1)

This is the bulletin issue of the News. More details on the news stories plus special features in next week's full size issue.

## 'Better Care—Less Repair' Campaign Hailed by OWU & OCR Chiefs

(Concluded from Page 1, Column 3)

longer appliance life. It is expected that the calendar check list will be distributed by the utilities through their home service departments at civic club meetings, P.T.A. groups, church associations, and by mail and personal contact.

### THE EMBLEM OF QUALITY

**EBCO**  
Electric Water Coolers  
WRITE FOR DETAILS  
The EBCO Manufacturing Company  
401 W. TOWN STREET COLUMBUS, OHIO

**MIDWEST**  
Household and Commercial Refrigerator Cabinets  
Now Making VITAL War Products for Army and Navy  
MIDWEST MFG. COMPANY  
CHICAGO, ILLINOIS

**PAR**  
COMMERCIAL REFRIGERATION UNITS FOR PROTECTION OF VITAL FOOD SUPPLIES  
See Your Par Jobber  
LYNCH MANUFACTURING CORP.  
DEFIANCE, OHIO, U.S.A.

**AMANA**  
Commercial REFRIGERATION  
Modern Display Cases Coolers, Refrigerators  
AMANA SOCIETY, AMANA, IOWA

**EVAPORATIVE CONDENSERS**  
Full range of sizes

**KRAMER TRENTON CO.**  
Heat Transfer Products  
TRENTON, N.J.

**HARDER**  
HOME FREEZERS  
An Opportunity For  
JOBBERS, DISTRIBUTORS and DEALERS to share in the postwar demand for Home Freezers. Write today.

**HARDER** Refrigerator Corporation  
COBLESKILL, NEW YORK



**PENN** BRASS & COPPER COMPANY, INC.  
POWELL AVE. \* ERIE, PA.  
Seamless Brass and Copper Tubing

## New CMP9A Rule Simplifies Buying Of Repair Parts

WASHINGTON, D.C.—Service and repairmen in all fields, including refrigeration and air conditioning, should find it easier to obtain the materials they need for their work under the new CMP Regulation No. 9A, believes the Office of Civilian Requirements.

Heavy advertising and promotion will back up the drive, with electrical manufacturers telling the story in 30 national magazines, trade papers, and over the air, while utilities and dealers stress the campaign in local newspaper and radio advertising.

Servicemen are assured by the E.E.I. that the "Better Care—Less Repair" program is intended in no way to encourage householders to tinker with their appliances or fix things beyond their ability to do so.

The campaign should, in fact, improve conditions for servicemen, believes E.E.I. If housewives pay more attention to their appliances, there will probably be more minor repair jobs for the servicemen to handle, but major breakdowns requiring more of the servicemen's time and more critical materials may be avoided by the minor repairs, it is thought.

In stating his approval of the campaign, J. A. Krug, director, Office of War Utilities of WPB, told E.E.I., "The campaign ties in with our desire that all users of appliances shall maintain them so that they may last longer and be available for use to work for those whose help is needed in the prosecution of the war. The campaign is also in line with the overall program of the government to 'Fight Waste', and we greatly appreciate your assistance in this regard."

The Appliance Conservation Program is an "important, forward step in civilian service, and we in the Office of Civilian Requirements will do our best to provide the critical materials to keep essential lighting and electric equipment operating during the war emergency," declared A. D. Whiteside, vice chairman for Civilian Requirements.

"My associates and I believe this to be worthwhile effort on the part of the electrical industry," added Mr. Whiteside. "Our concern is to make it possible for the millions of civilians who are dependent on vital time-saving and labor-saving equipment to obtain repair parts and maintenance service."

Assisting Mr. Rodger, the general chairman, are the following other utility executives serving on the advisory committee: C. A. Collier, R. D. Cutler, D. M. DeBard, Ted B. Ferguson, R. E. Fisher, C. E. Michel, G. W. Ousler, W. E. Parrott, H. M. Sawyer, M. E. Skinner, Edwin Vennard, G. E. Whitwell, and H. E. Young.

**Army Air Field Photo Lab. Gets Air Conditioning**

HARLINGEN ARMY AIR FIELD, Texas—Air conditioning is being installed in the photo laboratory here as part of an expansion program.

Upon his resignation, Mr. Sullivan will return to private business. Mr. R. P. Reese, treasurer of Copper Recovery Corp., will return to his home in Tampa, Fla.

### McDermott to Distribute Crosley in Oklahoma

CINCINNATI—Appointment of Tom P. McDermott, Inc. as exclusive wholesale state distributor for the Crosley Corp. in Oklahoma, has been announced by J. H. Rasmussen, commercial manager of Crosley.

Tom P. McDermott, president and general manager of the organization, has been operating a wholesale tire and auto specialty plant in Tulsa for the past 15 years.

The firm is about to occupy the former Continental Oil building in Tulsa as its permanent business home. The building contains about 50,000 square feet of floor space and is completely modern in every particular.

The company is also using four other buildings for warehouses, in addition to its present location.

An Oklahoma City branch has already been established at 27 E. Grand Ave., where parts and service will be available.

The order itself permits servicemen to purchase up to 500 pounds of copper, 20 tons of carbon and alloy steel, and 200 pounds of specified types of aluminum on the certificate basis in any calendar quarter; but it also provides that they may buy, through the same manner, as much other material as they need for repair and maintenance.

To explain how the new order works, OCR cited as an example a plumbing and heating contractor who is called in to repair leaky pipes in a heating system and finds that he needs steel or copper tubing, may purchase these pipes through the certificate method. But, if in investigating further he discovers that an entirely new furnace is needed, he is allowed to buy that in the same way.

### Copper Recovery Corp. Will Be Dissolved On Dec. 31st

NEW YORK CITY—Plans to terminate operations of the Copper Recovery Corp. by the first of the year, with unfinished business to be turned over to the Metals Reserve Co., are announced by John P. Sullivan, president of the corporation, whose resignation is scheduled for Dec. 31.

The CRC, set up nearly two years ago for the purpose of purchasing and reselling inventories of copper and copper-base alloys which had been frozen by the WPB in thousands of plants, is to be dissolved and Mr. Murray Cook, agent for Metals Reserve Co., has been chosen to handle final settlements of the organization.

By the end of this year, CRC will have purchased and resold one-third of 350,000,000 pounds of material reported, and disposed of a similar amount in direct deals between purchasers and holders. During its existence, CRC likewise bought and sold to the armed services 30,000,000 square feet of copper and bronze insect screening.

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## Refrigeration Vital In Pacific Area, Army Repairman Says

By Sgt. Charles B. Dunham

CAMP LEE, Va.—Imagine stepping out of your front door and frying eggs on the sidewalk! Well, that's exactly what American soldiers can do on the coral reefs in the South Pacific. With such heat, it's natural that constant refrigeration of eggs and other perishable foods is essential. With temperatures reaching 120° to 125° in the shade, perishable foods spoil if left two or three hours without proper refrigeration.

In order to provide our fighting men in this theater of operations with adequate quantities of properly protected nutritious foods, the U. S. Army's Quartermaster Corps must install, maintain, and repair all refrigeration equipment for the Army, including the Air Corps. Quartermaster refrigeration companies and separate platoons of skilled refrigeration mechanics are stationed throughout the vast area.

### VARIETY OF USES

Cpl. Lawrence Purcell, now at the Refrigeration School, Quartermaster Replacement Training Center, Camp Lee, Virginia, was assigned to such a Quartermaster refrigeration platoon based on New Caladonia, for seven months before returning to the States. He points out that, in addition to keeping food from spoiling, refrigeration is used by the Army in the South Pacific in medical detachments, in hospitals, and for preserving bodies until burial conditions are suitable.

Cpl. Purcell's refrigeration platoon, though based on New Caledonia, was called upon to set up or repair refrigeration equipment at many bases in other sections of the South Pacific. He stated that he found many types of refrigeration equipment in use there—American domestic and commercial, Australian and New Zealand, which, incidentally were apparently older type models than ours.

Most of the equipment consisted of portable units for cold storage plants. However, on one island there were two ice plants. Cpl. Purcell constructed an ice plant on another island. He took a 2½-ton compressor and utilized a 12-by-16-foot brine tank obtained from the Engineers. He then set up the tank and the compressor, and placed the lines and controls in as he could get them. He

### Surplus of Metals May Mean More Products For Civilian Use

WASHINGTON, D.C.—With supplies of steel, copper, and aluminum piling up in surplus stocks, industrialists expect the War Production Board to relax its restriction on household goods and permit limited production soon, according to a survey made recently.

While no general reconversion of manufacturing is likely in the early months of 1944, industrialists feel certain that some very essential goods will be produced. Indications are that electric irons, washing machines, and refrigerators will be manufactured, though not in any great quantity, compared to present civilian needs.

One company estimates that the immediate demand totals 2,000,000 electric irons, 1,000,000 refrigerators, and 1,000,000 washing machines, the survey showed.

Predictions are made by some sources that steel surpluses of 10% may be on hand for civilian use early in 1944, while it is thought probable that reduced military requirements for certain war items will release labor and plant facilities for civilian manufacture.

Sharp economy cuts demanded by Congress may further reduce military orders this spring, some industrialists said.

had to use copper tubing in the tank since no pipes or similar equipment was available.

He obtained an agitator from a Navy tender, and had the ice tank placed next to the storage refrigerator. To obtain current for the agitator he utilized a gasoline motor. This improvised equipment was only a same-shift—but it worked, manufacturing 700 pounds of ice every 30 to 36 hours.

Repair operations on the islands consisted largely of work on seals, pressure controls, and starters. This was due to the fact that the extreme heat affected these parts most.

### A REAL JOB TO DO

Cpl. Purcell says the work of the Army Quartermasters in the South Pacific is no sinecure. "You have a job to do and you do it—the more quickly you get it done and over with, the more quickly the war will be won, and you can go home."

He stated the training he received in the Refrigeration School at Camp Lee's QMRTC, before he was assigned to the South Pacific, was invaluable to doing his job there.

Cpl. Purcell is a native of Jayton, Tex., where his wife and daughter now reside. Before entering the Army he was employed by the Espuela Creameries, Spur, Tex., as a refrigeration mechanic.

### FOOD MUST BE

### CONSERVED

Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.

### GENERAL REFRIGERATION DIVISION

**Yates-American Machine Co.**  
Beloit, Wis.  
**Kipman**  
AUTOMATIC REFRIGERATION

### "DAY & NIGHT" STORAGE TYPE TANKS SAVE SPACE

Compact "Day & Night" Storage Units, such as the Model CE-25 shown above, may be installed any place . . . on walls or ceilings . . . integral with condensing unit . . . wherever cold water is required for drinking, jacket cooling, photographic processes, cooling welding tips, etc. A modern Scuttlebutt for shipboard use. Supplied on storage capacities from 6 to 100 gallons.

Write For Latest Data

**COOLER DIVISION**  
**DAY & NIGHT MFG. CO.**  
MONROVIA, CALIFORNIA  
FACTORY REPRESENTATIVES  
NEW YORK A.C. Homeyer, 682 Eddy St. • MARSHANT, 565 Wash. Blvd.  
ST. LOUIS R.H. Spangler, 3331 Market St. • CHICAGO J.E. Parker, 228 2nd St.  
DECATUR, GA.

**POLARTRON**  
PRESSURE AND TEMPERATURE CONTROLS  
Extra features equivalent to 32 or more Special models are STANDARD in every M-H Polartron.  
**MINNEAPOLIS-HONEYWELL REGULATOR CO.**  
Refrigeration Controls and Control Systems  
The Symbol of Modern Refrigeration Control

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted," 5¢ per word; minimum charge, \$2.50. Three consecutive insertions, 12½¢ per word; minimum charge, \$6.25.

RATES for all other classifications, 10¢ per word, minimum charge, \$5.00 per insertion. Three consecutive insertions, 25¢ per word, minimum charge, \$12.50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

### EQUIPMENT WANTED

WANTED—3 inch, 4 inch, 5 inch double ammonia self-contained units. Give complete details as to make, age, condition, and price. MARYLAND REFRIGERATION CO., 706 N. Howard St., Baltimore, Md.

USED CONDENSING UNITS. We want to buy some ½ and ¾ 110-220 volt 60 cycle methyl condensing units in good operating condition. TRILLING & MONTAGUE, 2401 Walnut St., Philadelphia 3, Pa.

### EQUIPMENT FOR SALE

100—FRIGIDAIRE Model "K" ½-hp. units, \$2.50; 100—Frighdaire Model A233E ¾-hp. units, \$4.50. All units in running condition, with A.C. 60 cycle motors. F.O.B. New York. Write for our surplus list. 25% deposit must accompany all orders. EDISON COOLING CORP., Dept. R, R-310 E. 149th St., New York 51, N. Y.

MILK COOLERS equipped with General Electric Condensing Units. Various sizes. New, guaranteed equipment. Sold to dealers without priority. Orders taken for immediate and spring delivery. RAMSEY BROTHERS CO., 727 Bolivar Rd., Cleveland 15, Ohio.

ELECTRIC BOTTLE COOLERS. Brand new, streamlined. No priority required. Immediate shipment. 4½ case capacity. Self-contained with ¾-hp. Universal Cooler Corporation unit ready to plug in. Equipped with interior shelving and can be used as an 8 cu. ft. food refrigerator. Price \$105. GENERAL REFRIGERATOR CO., 855 N. Broad St., Philadelphia, Pa.

### POSITIONS AVAILABLE

BEST OPPORTUNITY in all America both during and after the war. San Diego, California, offers you everything worth living for. We need good service men. Will pay top wages, time and half and double time for over 44 hours plus liberal commissions. WRIGHT REFRIGERATION SERVICE, 1337 India St., San Diego 1, Calif.

MIDDLEWEST REFRIGERATOR MANUFACTURER desires the services of a man qualified to design commercial refrigerator cabinets, consisting of bottle coolers, reach-in cabinets, and beer dispensers equipment, also 8-10-12 cubic foot deep freeze cabinets. Should be able to make shop drawings so that models can be created as quickly as circumstances permit. Individual meeting these qualifications can work himself into having complete charge of engineering and production. Write to Box 1497, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION SERVICE mechanic. Best working conditions, steady work, good pay, only experienced need apply. Box 1498, Air Conditioning & Refrigeration News.

A THOROUGHLY EXPERIENCED refrigeration service man with at least 15 years of practical and constant experience is hereby offered an opportunity to consider a new job should he be dissatisfied. Steady job. Good salary. Located in the most ideal city in the country. All applications treated with strictest of confidence. Box 1496, Air Conditioning & Refrigeration News.

### POSITIONS WANTED

REFRIGERATOR SHOP MECHANIC. 44 years of age, 5 years experience on domestic and commercial electric driven units of many types. 10 years experience on AC and DC motors. Wish to work for an established firm. Box 1491, Air Conditioning & Refrigeration News.

EXPERIENCED REFRIGERATION salesman with successful background is desirous of obtaining representation of factory line of home freezing units, conservators or domestic refrigerators for postwar and present. Familiar with setting up jobber and dealer setups and direct to public sales organizations N. J.-Md.-D. C. and Eastern Penn. Correspondence invited. Box 1494, Air Conditioning & Refrigeration News.

MANUFACTURER'S REPRESENTATIVE for refrigeration service and installation. Twenty-five years experience on all air conditioning, commercial, and low temperature installation and maintenance on all gases. Capable of conducting large crew of workmen and repair shop. Can furnish list of references. Midwest territory, headquarters in Chicago. Box 1499, Air Conditioning & Refrigeration News.

### BUSINESS OPPORTUNITIES

LARGEST COMMERCIAL refrigeration and restaurant supply house in Los Angeles interested in contacting lines allied to our business for West Coast post-war distribution. Established since 1920 in Los Angeles. ELSTER'S, 115 S. Los Angeles St., Los Angeles 12, Calif.

Specify DAVISON'S DRYERS THAT BEAR THIS LABEL  
CHARGED IN SILICA GEL WITH Ask your Jobber

## New High Vacuum Diffusion Process For Penicillin Expected to Permit Greatly Increased Production Rate

BOSTON—A new high vacuum diffusion process developed by the National Research Corp. of Boston and adapted to the drying of penicillin is believed to solve the problem of processing the active germ-killing organism once it is extracted on the large scale planned.

The process is being made available royalty-free for the production of penicillin in government-sponsored plants during the war emergency.

On the basis of preliminary tests, the Chemicals Division of the War Production Board believes that the 20-40 hour cycle now considered necessary for processing penicillin in the last stage can be reduced through this high vacuum diffusion method to six hours, and the cost of dehydration cut to one-sixth of any conventional method.

Army and Navy experts expediting the production of penicillin are convinced that a single installation of this novel dehydrator can handle ten billion units of this life-saving drug a week, far surpassing the output by methods now in use. Such an installation would make available 1,300 doses of penicillin a day, when used to treat certain types of pneumonia.

### DEHYDRATION NECESSARY

Since penicillin in solution form, after extraction from the mold, is an unstable product, dehydration is necessary. The use of heat to accomplish this is out of the question, so the dehydration is achieved through vacuum.

Heretofore, steam ejectors, mechanical pumps, and a freezing method utilizing a cold trap have been used on a limited scale in vacuum dehydration.

The problem, however, is an extremely difficult one. The penicillin is in a frozen state when it is dehydrated, the moisture being removed in vapor form without liquefaction. Because of the enormous expansion of gases under the high vacuum employed, a pumping system of tremendous capacity is required to exhaust the great volume of vapor.

Some idea of the volume of gas which must be handled can be gained from the fact that an ice cube weighing one ounce represents at ordinary atmospheric pressure a little over a cubic foot of water vapor. At the low pressure involved in this process, this ice cube expands into more than 25,000 cubic feet of vapor.

Freezing methods of vacuum dehydration have heretofore been handicapped by the building up of heavy ice layers in compartments specially

## WPB, Business Study Distribution Order

WASHINGTON, D. C.—Manufacturers and wholesalers will be permitted to discuss with OCR officials the forthcoming WPB order on equitable distribution of consumer goods other than food at three regional conferences, one scheduled for Dec. 13 and 14 in New York City and the others planned for Dec. 16 and 17 in both Cleveland and St. Louis.

Appointments may be made at the WPB Wholesale and Retail Trade Division in New York City and the WPB regional offices in Cleveland and St. Louis.

Without disturbing the usual methods of doing business, the Equitable Distribution Order, will say, in effect, that adaptation must be made to meet war necessities, WPB announced. The smaller retailer should be better able to serve his community and the retail customer more readily able to obtain needed goods in all communities when the proposed order becomes effective, WPB hopes.

The order is said to be principally a WPB declaration of policy, designed to correct war-caused inequities in the flow of goods, and the order asks voluntary compliance with broad principles.

These principles, WPB says, involve non-discrimination between large and small buyers, suitable provision for the needs of buyers who have lost their usual sources of supply, and other emergency conditions.

Due regard for population shifts is particularly emphasized in the forthcoming order, which will incorporate statistical information in population changes.

designed to collect the vapor as evolved. Difficulties have also been experienced in attaining extremely low pressures.

In the vacuum diffusion process as developed by the National Research Corp., residual air pressures are reduced to less than one ten-thousandths of an atmosphere with the aid of special high vacuum pumps of tremendous capacity. The water vapor is continuously removed from the pumping system at very low temperatures in the form of ice by means of a rotary condenser.

### LAST 2% IS HARDEST

In drying penicillin, as well as blood plasma and certain drugs it is imperative that all moisture be removed. Extracting the last 2% of water vapor ordinarily has taken as much time and is more difficult than driving off all the rest of the original content.

Since even minute amounts of moisture are harmful, proper desiccation and packaging are highly important parts of the whole process, and have proved costly and troublesome to firms making penicillin. Packaging in permanent containers, incidentally, is also done under high vacuum, to insure that no harmful moisture will be picked up.

Unlike some vitamins and drugs which have yielded the secret of their chemical combination under investigation so that they could be reconstructed with common chemical building blocks, penicillin's structure is so complicated it may defy analysis for a long time.

### USE NATURAL GROWTH

The National Research Council's recommendations have channeled WPB activity along the line of production from the natural common mold. This growth, which is found on oranges and bread, requires about 10 days by the flask method and three to five days in large tanks. Currently about 20 drug manufacturers are concentrating on expanding production of the raw material.

The second step of extracting the essential penicillin notatum organism from the growth on a large scale will not pose insuperable problems. And now by employing the advantages of the new high vacuum diffusion process, it appears that the joint efforts of government agencies, drug manufacturers and medical specialists will be successful in bringing the promise of penicillin to fulfillment in the national interest.

Except on the appeal of a buyer to the War Production Board, a supplier's operation will not be subject to government scrutiny or complicated by additional reports, promises WPB. But, on receipt of a suitably documented appeal, WPB will make careful investigation of the distribution practice involved and enforce such corrective measures as may be necessary in particular cases, it was said.

## Goldberg's Christmas Party Plans Completed

CHICAGO—Final preparations for his seventh annual Christmas party, to be held the evening of Dec. 16 in the Grand Ballroom of the Drake hotel, are just about completed, reports Herman Goldberg, manufacturers' representative.

Scheduled to start at 9 p.m., the party will include several acts of entertainment, dancing to Don Fernando's CBS orchestra, refreshment, and draw prizes of war bonds and stamps.

## Worthington Pump Refunds Half Million to U. S.

HARRISON, N. J.—Worthington Pump & Machinery Corp. is refunding to the government \$551,426 as a result of completed renegotiation of war contracts for 1942, it is reported. Under the settlement the government receives \$2,100,000 less applicable Federal income and excess profit taxes.

Worthington's actual net income for 1942 amounts to \$2,758,890, or \$7.86 a share. After deduction of the refund net income becomes \$2,207,463 or about \$5.79 a share.

## Conditioned Gauge Room Provides Precision Fits for Ordnance

CINCINNATI—When metal parts of precision war mechanisms made in plants located in the heat of the deep South fit perfectly with parts made in plants up North, no small portion of the credit goes to operations conducted under controlled temperature and humidity conditions in the gauge room of the Cincinnati Ordnance plant of the United States Army.

In the gauge laboratory at Cincinnati, air conditioned by Carrier equipment, are master gauges for calibrating the gauges that are used by manufacturers making Army supplies. Here checking is done to insure that gauges all over the country are in accord so that parts from one area will fit those from another.

To avoid variations in the gauges due to weather, constant conditions are maintained within the room. Temperature is held at 68° F. with a variation not to exceed 1° F. and the relative humidity is held below 50%.

The gauges tested include those measuring length to 1/10,000,000 of an inch, electrolimit gauges, thread gauges, plug gauges and depth gauges.

The purpose of air conditioning in the room is to have the same conditions for testing at all times. Temperature variations are not permitted as they will cause changes in dimensions of metal and will make the gauges read inaccurately. Control of relative humidity is important in a gauge room since no rust or corrosion, due to moisture condensation, can be permitted. In addition, air must be dust free for the fine instruments to remain accurate.

In laying out the air conditioning installation, engineers of the Cincinnati Air Conditioning Co., Carrier dealer, took into account the hottest day on record in Cincinnati (108°) and the coldest day in the records of the Weather Bureau (-23°) so that even on extreme days the calibration work could be carried on.

### CUT-OUT CAPILLARY

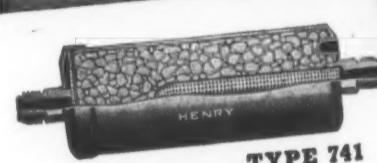


91-0

## PRECISION

Precision is a word that has become more important to Americans since Pearl Harbor. It is the key to interchangeable manufacturing. At Ranco, precision has always been a by-word. That is why we were selected to make some of the highly accurate instruments that are being used by the armed forces.

Ranco Inc. COLUMBUS, OHIO



...With Refill Plug and Dispersion Tube  
An inexpensive refillable large capacity dryer. It takes only a minute to unsolder the plug at the end of the unit, pour out the old dehydrant and replace it with a new charge.  
ASK YOUR JOBBER FOR IT  
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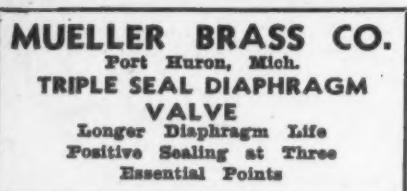
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## Postwar Kitchens Will Be Efficient And 'Homey' Too, Predicts I. W. Clark

MANSFIELD, Ohio—Postwar kitchens will stress hominess and such "working comforts" as top shelves that are easy to reach. There will be a softening of the cold, laboratory type kitchen and a return to some of the fundamentals that made the kitchens of yesteryear so comfortable and restful, according to Irving W. Clark, manager of the Westinghouse Better Homes department.

Mr. Clark explained that better use of window drapes, bric-a-brac and a wider range of wall colors will add personality to the kitchens of the postwar era.

Livability will be the theme, and kitchen designing will include a definite place for the radio, a table and a comfortable chair. The trend will be away from kitchens that are so compact and coldly efficient that they lack charm and warmth. He predicted that larger windows of improved design, plus a better use of floor space will give an "air of spaciousness" to kitchens which actually contain a limited floor area.

While the spacious pantries that were standard equipment for most homes in the early 1900's will remain a matter of history, a modern application of their best features will again become an integral part of the postwar kitchen.

Mr. Clark visualized postwar kitchens with cabinet storage spaces for utensils, gadgets, china and dry foods used daily, plus ample well-organized storage closets for can-

ning equipment, seasonal service dishes, extra china and many miscellaneous items found in most homes and used only for special occasions.

More attention will be focused on practical "working comfort" than on the mere elimination of steps. Mr. Clark said working comforts will include (1) kitchen designing that will provide a definite place where a woman can perform meal preparation work while seated comfortably instead of standing, (2) better adjustment of high storage compartments so the top shelf will be within easy reach, and (3) elimination of such mental hazards as doors that swing over a counter, cramped quarters, or "anything that a woman feels she must watch out for to avoid bumping her head, arm or leg."

Making the "kitchen of tomorrow" homey and livable was one of five points which the Westinghouse executive pictured as characteristics of future homes. The other four points included: Greater standardization of kitchen designs and dimensions caused by the need for low-cost housing; better assembly of the complete kitchen unit made possible by improved designs for individual appliances and cabinetry; continuation of the Westinghouse-developed three-center fundamental of kitchen planning, including refrigeration and preparation center, sink and dishwashing center, and range and serving center; and better organization and greater utility of storing space.

## Crosley Appoints New Penna. Distributor

WASHINGTON, D. C.—A. W. Heintz and John M. Lambert, in charge of the recently created Material Coordinating Unit in the Refrigeration and Air Conditioning Section of WPB's General Industrial Equipment Division, have outlined a suggested procedure for manufacturers who need help in obtaining materials needed to meet contracts.

These men will contact the various branches of the Army, Navy, Maritime Commission and other government agencies to determine the programs delayed by late deliveries of refrigeration and air conditioning equipment. Then they will determine causes of delayed deliveries, which, as was previously announced, are almost always due to shortages of materials produced outside of the refrigeration industry proper.

Action will then be taken with the War Production Board to coordinate the flow of materials.

When a manufacturer desires the assistance of this new unit in obtaining bottle-neck components, he should accompany his request, Messrs. Heintz and Lambert advise, with the following information:

1. Prime contract number and or purchase order number for your end item.
2. Description of your end item and delivery date called for.
3. Description, quantity, and value of material or component causing difficulty.
4. Name and address of supplier with whom order is placed.
5. Date of your order.
6. Your order number.
7. Supplier's order number.
8. Present rating.
9. Date promised with present rating.
10. Delivery date or dates required to meet the delivery schedule or your end item.
11. Rating needed to meet required delivery date.
12. Other suppliers investigated and delivery dates promised.

## R. B. Sayre Heads Memphis Office of Graybar

MEMPHIS, Tenn.—R. B. Sayre has been named manager of the Memphis office of Graybar Electric Co., nationwide electrical distributor, replacing O. B. Chandler, who died recently after 24 years with the firm.

Mr. Sayre comes here from the Atlanta office, where since 1939 he had been manager of the outside construction department. He originally joined Graybar in 1921 as a warehouse clerk in Memphis, and two years later became a salesman covering north Mississippi, west Tennessee, and Arkansas.

## Nash-Kelvinator Directors Vote Stock Dividend

DETROIT—Directors of Nash-Kelvinator Corp. at a meeting Dec. 1 voted a dividend of 12½ cents a share on outstanding capital stock, payable Dec. 28 to stockholders of record Dec. 11.

## Army Post Engineers Start 4-Week Course On Refrigeration

CAMP COOKE, Calif.—In the interest of assisting units in camp with their refrigeration problems, Post Engineers are conducting a four week's school for enlisted men.

"We feel that many units when they get into the field and away from a camp with ASF installations which will have their own refrigeration units should have personnel familiar with the operation of such units," Capt. I. L. Collier, Post Engineer Executive Officer, said in giving the reason for the course.

The course is being taught by W. C. Roberts, Camp Refrigeration Engineer; Lt. S. B. Schurgen, Post Engineers office, and Pfc. John Ludthe, Post Engineers office.

Mr. Roberts said that while a complete refrigeration course cannot be given in four weeks, a combination classroom and shop course such as conducted here can familiarize individuals with operation of the units and help them do some trouble shooting. The course will cover heat loads and mechanical, portable and stationary refrigeration.

Mr. Roberts has been in charge of the Quartermaster cold storage plant and other refrigeration units here for many months and has been in refrigeration work for 15 years. Lt. Schurgen specialized in refrigeration work at Ft. Warren, Wyo. Pfc. Ludthe has been a mechanic in Post Engineers refrigeration department for some time.

## G-E Gives Young & Rubicam Appliance Account

BRIDGEPORT, Conn.—Household appliances manufactured by the appliance and merchandise department of the General Electric Co. will be advertised through contract with Young & Rubicam, Inc. beginning March 1, 1944.



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